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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,399	01/23/2002	Esko Nieminen	324-010832-US(PAR)	2603
2512	7590	08/17/2004	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			CHASE, SHELLY A	
			ART UNIT	PAPER NUMBER
			2133	

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/056,399	Applicant(s) NIEMINEN, ESKO	
	Examiner Shelly A Chase	Art Unit 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-22-2002</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 to 16 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119, which papers have been placed of record in the file.

Information Disclosure Statement

3. The references listed in the information disclosure statement submitted on 4-22-2002 have been considered by examiner (see attached PTO-1449).

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "218" (fig. 2b) has been used to designate both subtracting means and memory location. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective

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action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because please remove reference to fig. 3. Correction is required. See MPEP § 608.01(b).

Claim Objections

6. Claim 1 is objected to because of the following informalities: please change "the code structure" to --- a code structure --- on line 4, and "the code" to --- the code word --
- on line 7. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 to 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites the limitation "grouping termination bits" recited on line 5. There is insufficient antecedent basis for this limitation in the claim. The limitation "the samples" recited on line 13, is unclear since, the claim recites both "systematic

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termination samples” and “termination samples.” Claims 3 5 and 6 are also rejected due to their dependency on a rejected base claim.

Claims 2, 4, 7 and 8 recites the limitation “systematic samples” this term is unclear, the examiner is not sure if this term refers back to a previous term.

Claim 4, recites the limitation “termination components” on line 3, there is insufficient antecedent basis for this limitation in the claim.

Allowable Subject Matter

9. Claims 1 to 8 would be allowable once the 112 second paragraph rejection is overcome.

10. Claims 9 to 16 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: the instant invention claims decoding a turbo-coded code word that includes termination bits wherein a interleaver is extended in order that the ascending order addresses are equal to the extrinsic weight coefficient of the termination samples.

The prior art made of record teaches various methodologies for decoding turbo-coded code words. For instance, Crozier et al. (USP 6530059), discloses creating tail-biting recursive systematic convolutional and turbo codes and decoding the same, Hladik et al. (USP 5721745), discloses decoding parallel concatenated convolutional coding scheme that utilizes tail-biting non recursive systematic convolutional codes, and Reed et al. (*Turbo-code termination schemes and a novel alternative for short frames*) discloses several method for terminating a turbo code.

However, the prior art made of record taken alone or in combination is different from the instant invention in that the prior art made of record fails to teach or fairly suggest or render obvious the novel elements of the instant invention. Specifically, the prior art made of record fails to teach or fairly suggest a method for decoding a turbo-coded code word comprising termination bits, the method comprising: extending one or more interleavers of the code word such that the extension part comprises addresses of systematic termination samples corresponding to termination samples of one or more parity components associated each interleaver and addresses of extrinsic weight coefficients related to said systematic termination samples. Claims 2 to 8 are directly or indirectly dependent on claim 1 thus these claims are allowable over the prior art made of record.

Claim 9 is similar to claim 1 and is allowed for the same rationale applied to claim 1. Claims 10 to 16 are directly or indirectly dependent on claim 9 and are allowable due to their dependency on claim 9.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 703-308-7246. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shelly A Chase